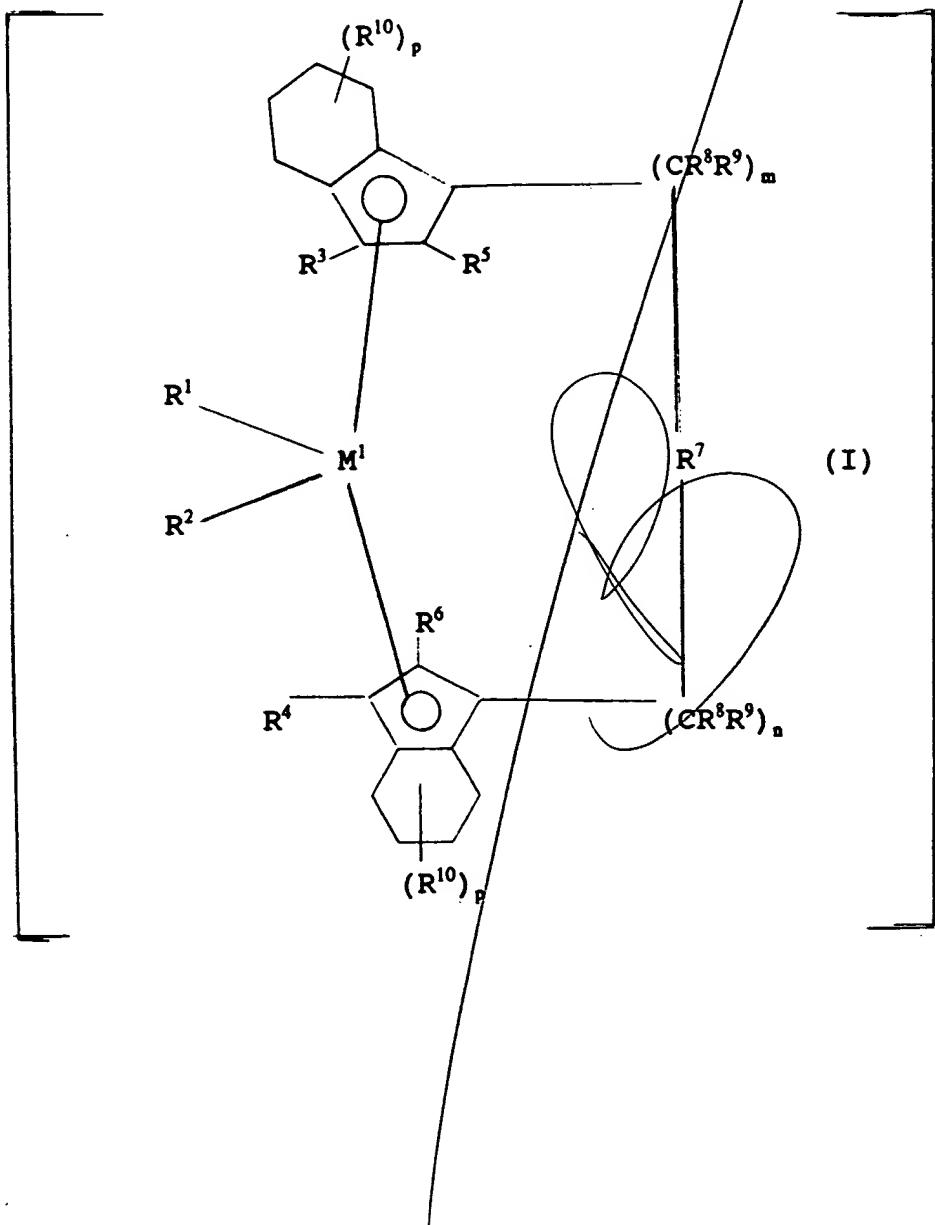
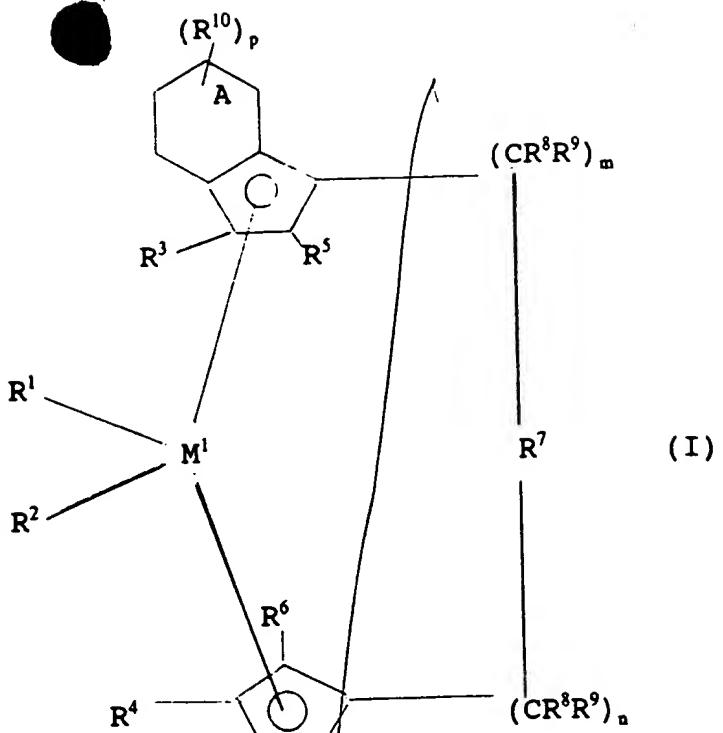


We claim:

1. A compound of the formula I [for preparing essentially isotactic olefin polymers]





in which

$M^1$  is a metal from group IVb, Vb or VIb of the Periodic Table

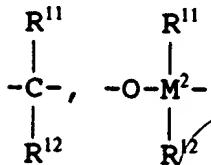
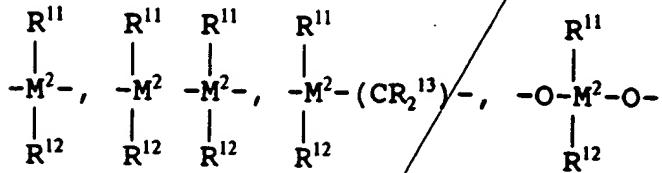
$R^1$  and  $R^2$  are identical or different and are a hydrogen atom, a  $C_1$ - $C_{10}$ -alkyl group, a  $C_1$ - $C_{10}$ -alkoxy group, a  $C_6$ - $C_{10}$ -aryl group, a  $C_6$ - $C_{10}$ -aryloxy group, a  $C_2$ - $C_{10}$ -alkenyl group, a  $C_7$ - $C_{40}$ -arylalkyl group, a  $C_7$ - $C_{40}$ -alkylaryl group, a  $C_8$ - $C_{40}$ -arylalkenyl group or a halogen atom,

$R^3$  and  $R^4$  are identical or different and are a hydrogen atom, a halogen atom, a halogen atom, a  $C_1$ - $C_{10}$ -alkyl group, which is optionally halogenated, a  $C_6$ - $C_{10}$ -aryl group, an  $-NR_2^{15}$ ,  $-SR^{15}$ ,  $-OSiR_3^{15}$ ,  $-SiR_3^{15}$  or  $-PR_2^{15}$

r cal in which  $R^{15}$  is a halogen atom, a  $C_1$ - $C_{10}$ -alkyl group or a  $C_6$ - $C_{10}$ -aryl group,

$R^5$  and  $R^6$  are identical or different and are as defined for  $R^3$  and  $R^4$ , with the proviso that  $R^5$  and  $R^6$  are not hydrogen,

$R^7$  is



$=BR^{11}$ ,  $=AlR^{11}$ ,  $-Ge-$ ,  $-Sn-$ ,  $-O-$ ,  $-S-$ ,  $=SO$ ,  $=SO_2$ ,  $=NR^{11}$ ,  $=CO$ ,  
 $=PR^{11}$  or  $=P(O)R^{11}$ ,

where

$R^{11}$ ,  $R^{12}$  and  $R^{13}$  are identical or different and are a hydrogen atom, a halogen atom, a  $C_1$ - $C_{10}$ -alkyl group, a  $C_1$ - $C_{10}$ -fluoroalkyl group, a  $C_6$ - $C_{10}$ -aryl group, a  $C_6$ - $C_{10}$ -fluoroaryl group, a  $C_1$ - $C_{10}$ -alkoxy group, a  $C_2$ - $C_{10}$ -alkenyl group, a  $C_7$ - $C_{40}$ -arylalkyl group, a  $C_8$ - $C_{40}$ -arylalkenyl group or a  $C_7$ - $C_{40}$ -alkylaryl group, or a pair of substituents  $R^{11}$  and  $R^{12}$  or  $R^{11}$  and  $R^{13}$  in each case with the atoms connecting them, form a ring,

$M^2$  is silicon, germanium or tin,

$R^8$  and  $R^9$  are identical or different and are as defined for

$R^{11}$

m and n are identical or different and are zero, 1 or 2, m plus n being zero, 1 or 2, [and]

the radicals R<sup>10</sup> are identical or different and are as defined

for R<sup>11</sup>, R<sup>12</sup> and R<sup>13</sup>.

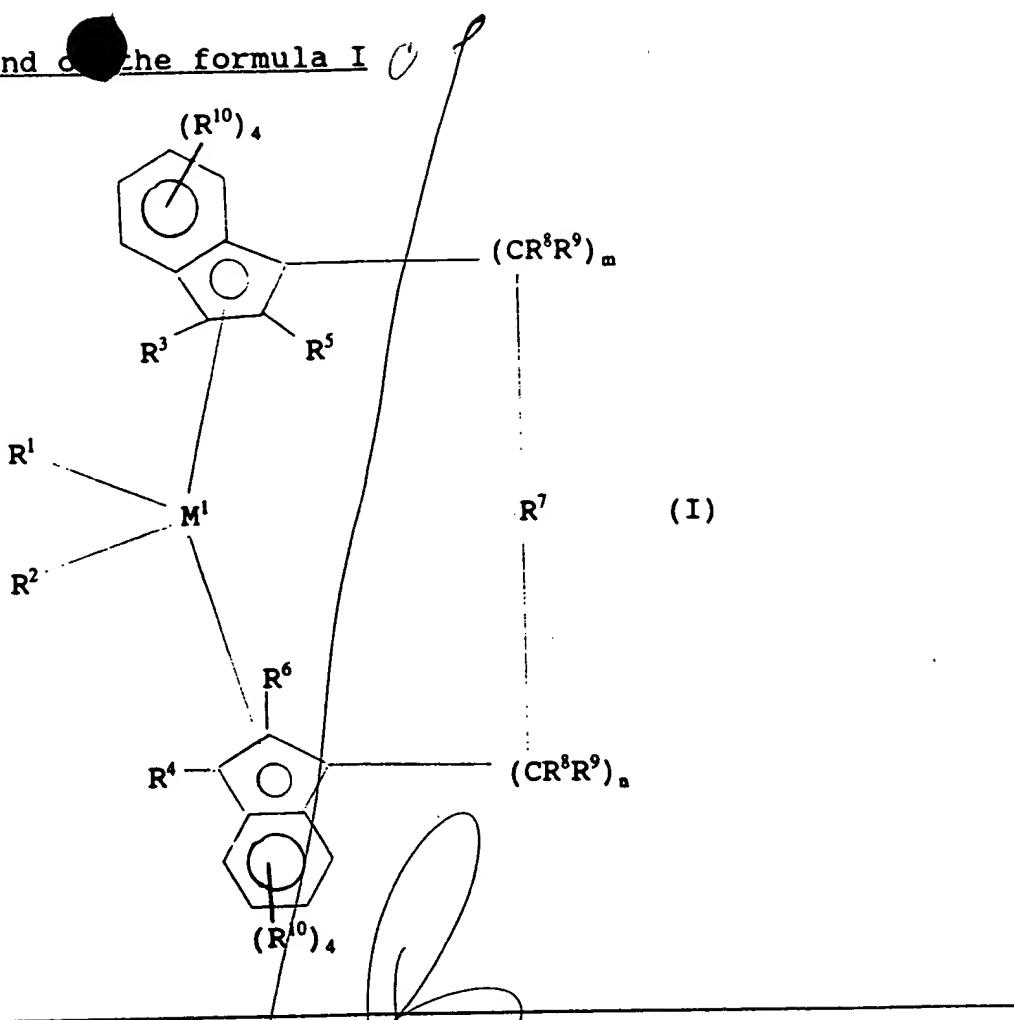
rings A are saturated or aromatic.

p is 8, when rings A are saturated, and

p is 4, when rings A are aromatic.

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16. A compound of the formula I



in which

M¹ is a metal from group IVb, Vb or VIb of the Periodic Table.

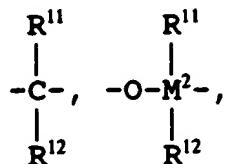
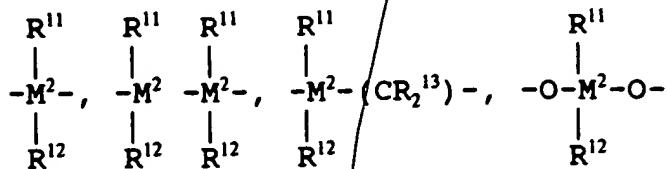
R¹ and R² are identical or different and are a hydrogen atom, a C<sub>1</sub>-C<sub>10</sub>-alkyl group, a C<sub>1</sub>-C<sub>10</sub>-alkoxy group, a C<sub>6</sub>-C<sub>10</sub>-aryl group, a C<sub>6</sub>-C<sub>10</sub>-aryloxy group, a C<sub>2</sub>-C<sub>10</sub>-alkenyl group, a C<sub>7</sub>-C<sub>40</sub>-arylalkyl group, a C<sub>7</sub>-C<sub>40</sub>-alkylaryl group, a C<sub>3</sub>-C<sub>40</sub>-arylalkenyl group or a halogen atom.

R³ and R⁴ are identical or different and are a hydrogen atom, a halogen atom, a C<sub>1</sub>-C<sub>10</sub>-alkyl group, which is optionally halogenated, a C<sub>6</sub>-C<sub>10</sub>-aryl group, an -NR<sub>15</sub><sup>15</sup>, -SR<sub>15</sub><sup>15</sup>, -OSiR<sub>3</sub><sup>15</sup>, -SiR<sub>3</sub><sup>15</sup> or PR<sub>2</sub><sup>15</sup> radical in which R<sup>15</sup> is a halogen atom, a C<sub>1</sub>-C<sub>10</sub>-alkyl group or a C<sub>6</sub>-C<sub>10</sub>-aryl group.

R⁵ and R⁶ are identical or different and are as defined for R³

and  $R^4$ , with the proviso that  $R^5$  and  $R^6$  are not both hydrogen,

$R^7$  is



$=BR^{11}$ ,  $=AlR^{11}$ ,  $-Ge-$ ,  $-Sn-$ ,  $-O-$ ,  $-S-$ ,  $=SO$ ,  $=SO_2$ ,  $=NR^{11}$ ,  $=CO$ ,  $=PR^{11}$

or  $=P(O)R^{11}$ .

where

$R^{11}$ ,  $R^{12}$  and  $R^{13}$  are identical or different and are a hydrogen atom, a halogen atom, a  $C_1-C_{10}$ -alkyl group, a  $C_1-C_{10}$ -fluoroalkyl group, a  $C_6-C_{10}$ -aryl group, a  $C_2-C_{10}$ -alkenyl group, a  $C_7-C_{40}$ -arylalkyl group, a  $C_8-C_{40}$ -arylalkenyl group or a  $C_7-C_{40}$ -alkylaryl group, or a pair of substituents  $R^{11}$  and  $R^{12}$  or  $R^{11}$  and  $R^{13}$ , in each case with the atoms connecting them, form a ring,

$M^2$  is silicon, germanium or tin,

$R^8$  and  $R^9$  are identical or different and are as defined for  $R^{11}$ ,

$m$  and  $n$  are identical or different and are zero, 1 or 2,  $m$  plus  $n$  being zero, 1 or 2.

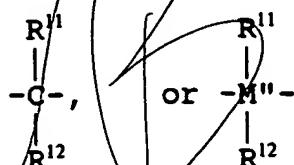
the radicals  $R^{10}$  are the same or different and are as defined for  $R^{11}$ ,  $R^{12}$  and  $R^{13}$ .

17. A compound claimed in claim 16, wherein: (C)  
M<sup>1</sup> is titanium, zirconium, hafnium, vanadium, niobium, or tantalum,

R<sup>1</sup> and R<sup>2</sup> are identical or different and are methyl or halogen,  
R<sup>3</sup> and R<sup>4</sup> are hydrogen,

R<sup>5</sup> and R<sup>6</sup> are identical or different and are methyl, ethyl, or trifluoromethyl,

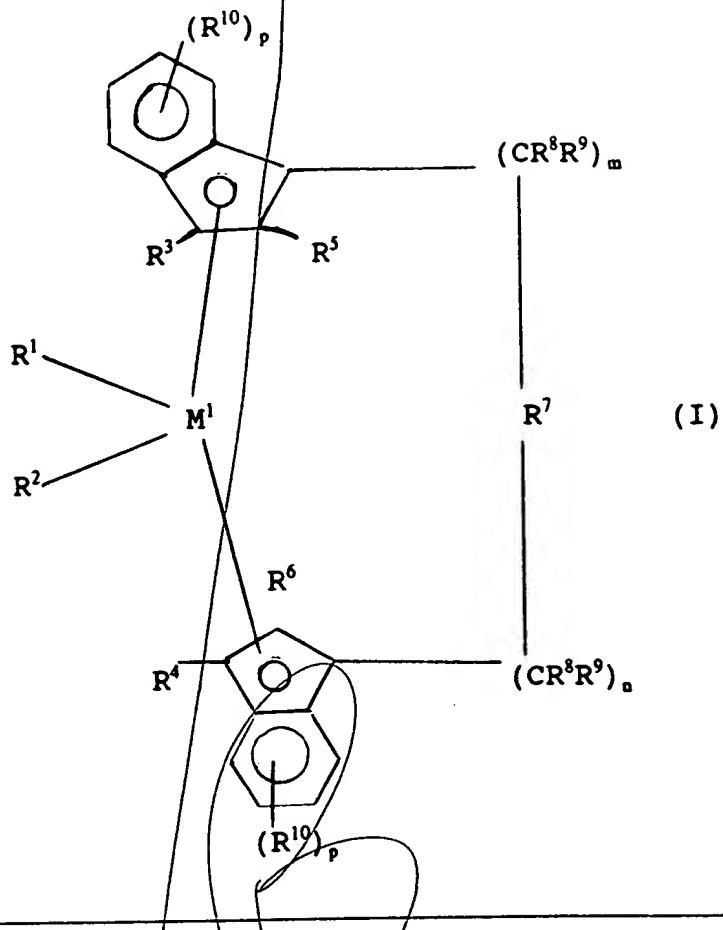
R<sup>7</sup> is a radical of the formula



where M'' is silicon or germanium, and

R<sup>8</sup> and R<sup>9</sup> are identical or different and are hydrogen or C<sub>1</sub>-C<sub>10</sub>-alkyl.

18. A compound of the formula I C

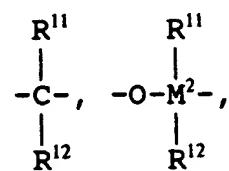
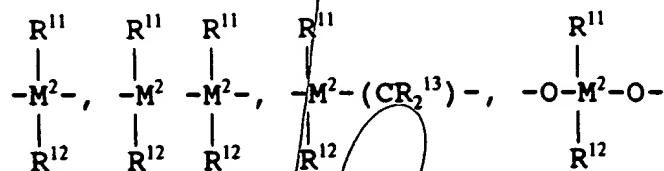


in which

M¹ is a metal from group IVb, Vb or VIb of the Periodic Table,  
R¹ and R² are identical or different and are a hydrogen atom,  
a C<sub>1</sub>-C<sub>10</sub>-alkyl group, a C<sub>1</sub>-C<sub>10</sub>-alkoxy group, a C<sub>6</sub>-C<sub>10</sub>-aryl group,  
a C<sub>6</sub>-C<sub>10</sub>-aryloxy group, a C<sub>2</sub>-C<sub>10</sub>-alkenyl group, a C<sub>7</sub>-C<sub>40</sub>-  
arylalkyl group, a C<sub>7</sub>-C<sub>40</sub>-alkylaryl group, a C<sub>8</sub>-C<sub>40</sub>-arylalkenyl  
group or a halogen atom,

R³ and R⁴ are identical or different and are a hydrogen atom,  
a halogen atom, a C<sub>1</sub>-C<sub>10</sub>-alkyl group, which is optionally  
halogenated, a C<sub>6</sub>-C<sub>10</sub>-aryl group, an -NR<sub>2</sub><sup>15</sup>, -SR<sup>15</sup>, -OSiR<sub>3</sub><sup>15</sup>, -SiR<sub>3</sub><sup>15</sup>  
or PR<sub>2</sub><sup>15</sup> radical in which R<sup>15</sup> is a halogen atom, a C<sub>1</sub>-C<sub>10</sub>-alkyl  
group or a C<sub>6</sub>-C<sub>10</sub>-aryl group,

$R^5$  and  $R^6$  are identical or different as defined for  $R^3$   
and  $R^4$ , with the proviso that  $R^5$  and  $R^6$  are not both hydrogen,  
 $R^7$  is



=BR<sup>11</sup>, =AlR<sup>11</sup>, -e-, -Sn-, -O-, -S-, =SO, =O<sub>2</sub>, =NR<sup>11</sup>, =CO, =PR<sup>11</sup>

or =P(O)R<sup>11</sup>,

where

R<sup>11</sup>, R<sup>12</sup> and R<sup>13</sup> are identical or different and are a hydrogen atom, a halogen atom, a C<sub>1</sub>-C<sub>10</sub>-alkyl group, a C<sub>1</sub>-C<sub>10</sub>-fluoroalkyl group, a C<sub>6</sub>-C<sub>10</sub>-aryl group, a C<sub>2</sub>-C<sub>10</sub>-alkenyl group, a C<sub>7</sub>-C<sub>40</sub>-arylalkyl group, a C<sub>8</sub>-C<sub>40</sub>-arylalkenyl group or a C<sub>7</sub>-C<sub>40</sub>-alkylaryl group, or a pair of substituents R<sup>11</sup> and R<sup>12</sup> or R<sup>11</sup> and R<sup>13</sup>, in each case with the atoms connecting them, form a ring.

M<sup>2</sup> is silicon, germanium or tin,

R<sup>8</sup> and R<sup>9</sup> are identical or different and are as defined for R<sup>11</sup>, m and n are identical or different and are zero, 1 or 2, m plus n being zero, 1 or 2,

p is a number from 1 to 4, and

the radicals R<sup>10</sup> are the same or different and are a halogen atom, a C<sub>1</sub>-C<sub>10</sub>-alkyl group, a C<sub>1</sub>-C<sub>10</sub>-fluoroalkyl group, a C<sub>6</sub>-C<sub>10</sub>-aryl group, a C<sub>2</sub>-C<sub>10</sub>-alkenyl group, a C<sub>7</sub>-C<sub>40</sub>-arylalkyl group, a C<sub>8</sub>-C<sub>40</sub>-arylalkenyl group or a C<sub>7</sub>-C<sub>40</sub>-alkylaryl group, or a pair of substituents R<sup>10</sup>, with the atoms connecting them, form a ring.

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*AB*  
*C4*